

# PATENT COOPERATION TREATY

From the Japan Patent Office  
 (INTERNATIONAL SEARCHING AUTHORITY)

**PCT**

**To:** Agent of Applicant  
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**WRITTEN OPINION OF THE INTERNATIONAL**

**SEARCHING AUTHORITY**  
**(PCT Rule 43-2.1)**

		<b>Date of mailing</b> <i>(day/month/year)</i> 20.4.2004
Applicant's or agent's file reference 09604		For Further Action see paragraph 2 below
International application No. PCT/JP2004/000401	International filing date <i>(day/month/year)</i> 20.01.2004	Priority date <i>(day/month/year)</i> 21.01.2003
International Patent Classification (IPC)      Int. Cl. <sup>7</sup> B01J31/22, C07C41/06, 43/15, C07B61/00		
Applicant KURARAY CO., LTD.		

**1. This report contains indications relating to the following items:**

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43-2.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

**2. Further Action**

If a demand for international preliminary examination is made, this written opinion is the first drawn up by the International Preliminary Examining Authority (IPEA) except that this does not apply where the Applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Established this written opinion 02.04.2004	
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WRITTEN OPINION OF THE INTERNATIONAL  
SEARCHING AUTHORITY

Intern. application No.PCT/JP2004/000401

I. Basis of the opinion

1. Unless otherwise indicated under this item, this written opinion was drawn up based on the language in which the international application was filed.  
[ ] This written opinion is in the following language \_\_\_\_\_ which is:  
The language of a translation furnished for the purposes of the international search (under Rule 12.3 and 23.1 (b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of
  - a. type of material
    - a sequence listing
    - table(s) related to the sequence listing
  - b. format of material
    - on paper
    - in electronic form
  - c. time of filing/furnishing
    - contained in the international application in written form
    - filed together with the international application in computer readable form
    - furnished subsequently to this Authority for the purposes of search
3. In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL  
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Intern. application No.PCT/JP2004/000401

V. Reasoned statement under Rule 43-2.1(a)(i) with regard to novelty, inventive step and industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	9-22	YES
	Claims	1-8	NO
Inventive Step (IS)	Claims	9-22	YES
	Claims	1-8	NO
Industrial Applicability (IA)	Claims	1-22	YES
	Claims		NO

2. Citations and Explanations

Reference 1: US 5886211 A1  
(Sagami Chemical Research Center) 1999.03.23

Claim 1 lacks novelty over Reference 1 cited in the International Search Report.

Reference 1 describes, at column 6, line 14 - column 7, line 55, a composition containing a palladium compound, a supporting ligand and a base, and recites isocyanides as the supporting ligand.

Claim 2 lacks novelty over Reference 1.

Reference 1 recites, at column 6, lines 14-62, a divalent palladium salt as the palladium compound.

Claim 3 lacks novelty over Reference 1.

Reference 1 recites, at column 7, lines 15-34, t-butylisocyanide as the isocyanides.

Claims 4, 5, 7 and 8 lack novelty over Reference 1.

In the invention described in Reference 1, too, the composition ratio of the isocyanides and the base relative to the palladium compound is considered to be of the same level as that in the present invention (column 6, line 14 - column 7, line 55).

Claim 6 lacks novelty over Reference 1.

In the invention described in Reference 1, too, similar bases as used in the present invention are used (column 7, lines 35-55).

Moreover, claims 1-8 lack inventive step over Reference 1.

Claims 9-22 have novelty and inventive step.

None of the references cited in the International Search Report describes or suggests a telomerization reaction of a conjugated diene compound and alcohols in the presence of the composition of claim 1 as a catalyst to give ethers.